

Bat Survey Report



17 Thicket Road

On behalf of Timothy Rooke

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1 Executive Summary

Ecology by Design Ltd was commissioned by Timothy Rooke to undertake a bat survey of 17 Thicket Road, Tilehurst, Reading, RG30 4TY (SU 67253 73536).

All surveys were conducted based on standard guidance for bat surveys (Collins (ed.), 2016).

A preliminary roost assessment was conducted on 10th February 2020, which identified several possible roosting features but no direct evidence of bats. In order to ascertain whether bats were roosting within the building one dusk emergence bat survey was undertaken in May 2020.

No bats were recorded emerging from or returning to roost in the building during the survey and at no point during the survey did any bats show any interest in the building. Bat activity levels during the survey were very low with a small number of bats recorded commuting within the vicinity of the house.

Bats do not pose a constraint to proposed works.

1.1 Recommendations

Any new or altered lighting for the site should be designed sensitively to avoid disturbing bats commuting within the vicinity of the site and avoid light spill.

2 Introduction

2.1 Background and Survey Objectives

Ecology by Design Ltd was commissioned by Timothy Rooke to undertake a bat survey of 17 Thicket Road, Tilehurst, Reading, RG30 4TY (central grid reference SU 67253 73536).

The objectives of this report are:

- Identify any potentially significant ecological constraints that may affect the proposed work;
- Identify the species of bat using the surveyed area;
- Assess the levels of activity of bats utilising the site; and
- Mitigation measures required ensuring any proposed works do not negatively affect bat populations and that a net gain for biodiversity is achieved.

2.2 Site Description

The site is located within the town of Tilehurst in Berkshire. The site is immediately surrounded by residential house on to the north, east and west with a small area of woodland located approximately 20m to the south east. The wider landscape is dominated by residential development with a park and school playing fields approximately 250m south east of the site. The River Thames and a railway line are located approximately 1.5km north east of the site.

The site itself comprises a semi-detached house which is in active use, with a garden to the north and driveway to the south.

2.3 Proposed Works

The proposal includes the demolition of the existing conservatory and first floor extension and construction of a two storey extension to the north of the house.

2.4 Limitations/ Constraints

The wildlife and wider ecological interest of a site can change. The report presented here is a statement of the findings of surveys carried out between February and May 2020.

Any appreciable delay in making reference to this report may necessitate a re-survey.

3 Methods

3.1 Desk Study

A desk study was completed to identify bat records within 2km of the site. Sources used include:

- Thames Valley Environmental Records Center (www.tverc.org)

3.2 Preliminary Roost Assessment

Ecology by Design ecologists Emily Bartlett (Natural England Bat Licence 2019-43526-CLS-CLS) and Emily Power (Natural England Bat Licence 2017-32544-CLS-CLS) conducted a preliminary roost assessment of the building on the 10th February 2020. The assessment was based on the guidance included in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins (ed.), 2016).

The building was inspected for potential bat use by examining internal structures for active roosts or roosting sites and suitable entry, exit and roosting points on the outside of the building, and by searching for other evidence of bat activity such as droppings, smells, sounds, carcasses or food remains. A high-powered torch was used to illuminate the dark recesses inside and outside of the building.

Equipment used included:

- LEDLenser Lamp
- 10x42mm close focusing binoculars

During the survey the building was thoroughly inspected including:

- Roof structure - gaps in tiles, under and over wall plates where accessible, gaps in wooden beam structure, between roof and beams and under the eaves. Internally through tears in roofing felt.
- Walls - Gaps in walls, between beams and the walls.

Evidence searched for included:

- The presence of free hanging bats and bats within gaps, crevices.
- Bat droppings, urine stains, rub marks, scratch marks, in wall holes, timber joints, windows, rafters and beams and across the floor.
- Feeding remains scattered around the building, on wooden beams, along the ridgeline and on top of stored materials.

3.3 Roost Survey

The house was identified as having low potential to support roosting bats and therefore one bat dusk emergence survey was undertaken.

The surveys were based on the guidance included in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins (ed.), 2016). Bat detectors utilized included Elekon Batlogger M detectors to record any bats emerging from or re-entering the building.

The emergence survey commenced approximately 15 minutes before sunset and lasted until 1.5 hours after sunset.

The survey was undertaken by Ecologists Tristan Carlyle and Tony Wells. Surveyors were located around the building to the north and south focused on features identified during the preliminary roost assessment. These locations enabled all potential roosting features to be viewed during the survey.

4 Results

4.1 Desk Study

Thames Valley Environmental Records Centre returned records of at least eight species of bat within 2km of the site, a summary of which is included in Table 1 below.

Table 1. Bat records from a 2km radius around the site.

Species	Latin name	Earliest record	Latest record	Number of records
Serotine bat	<i>Eptesicus serotinus</i>	2014	2018	4
Daubenton's bat	<i>Myotis daubentonii</i>	2018	2018	2
Leisler's bat	<i>Nyctalus leisleri</i>	2013	2013	2
Noctule bat	<i>Nyctalus noctule</i>	1985	2018	10
Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	2015	2015	1
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	1985	2018	35
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	2013	2018	25
Brown Long-eared bat	<i>Plecotus auratus</i>	1988	2017	9

4.2 Preliminary Roost Assessment

The house was subject to a preliminary roost assessment. No evidence of bats was found however, a number of potential roosting features were recorded.

The building is a two-storey semi-detached house which is in active use. The walls are constructed of red brick with a cavity and are rendered on the first storey. The roof is a hipped clay tiled roof with roof windows and chimney with lead flashing. There is a soffit box at the eaves which goes around the building.

To the north of the property is a single storey extension with a flat bitumen roof and a conservatory of glass and PVC construction (see Photos 1 and 2 in Appendix 1).

There is mortar missing from under ridge tiles to the south of the building and a lifted tile at the apex of the porch to the south. There was a further raised tile behind the chimney to the south and around the roof window to the east (see Photos 5 & 6). The A gap was noted under the PVC fascia board on the east of the single storey extension which was fairly cobwebbed (see Photo 4 in Appendix 1). The gap was inspected with an endoscope and it was found to allow access into the roof void of the flat roof single-storey extension. No evidence of bats was noted within or around the feature however, due to the depth of the void it was not possible to view all areas. An external light was noted adjacent to the gap.

Internally, the loft has been converted for use as a store room and play area and is well sealed. The walls and ceiling are boarded and there are two roof windows (see Photo 3 in Appendix 1).

No bats or evidence of bats were recorded internally or externally during the survey. Due to the presence of a small range of potential roosting features externally the building was assessed as having low potential to support roosting bats.

4.3 Roost Survey

Weather conditions during the roost survey were suitable for bats.

Table 2. Survey weather conditions

Date	Sunset/Sunrise	Start	End	Weather
14 th May 2020	20:47	20:32	22:17	12°C to 8°C, 1/8 cloud cover ¹ , 2 Beaufort ²

4.3.1 Dusk emergence 14th May 2020

No bats were recorded emerging from the building during the survey.

Bat activity was very low throughout the survey. One soprano pipistrelle (*Pipistrellus pygmaeus*) and three common pipistrelle (*Pipistrellus pipistrellus*) bat passes were recorded commuting within the vicinity of the house. A single noctule (*Nyctalus noctula*) bat was also recorded commuting over the site.

¹ Cloud cover is measured using the system called oktas. The visible sky is divided into eight and cloud presence is determined within each section. A value of one to eight is then assigned (1 okta being cloudless to 8 oktas being total cloud cover).

² The Beaufort scale is an empirical measure from 0-12 which relates wind speed to observed conditions. . 0- Calm, 1- Light air, 2- Light breeze, 3- Gentle breeze, 4- Moderate breeze, 5- Fresh breeze, 6- Strong breeze, 7- Moderate gale, 8- Fresh gale, 9- Strong gale, 10- Whole gale, 11- Storm, 12- Hurricane force.

5 Discussion

No bats or evidence of bats were recorded during the preliminary roost assessment however, a number of potential roosting features were identified. One dusk emergence survey was undertaken to ascertain whether bats were roosting within the building. No emergence or re-entries were recorded during the dusk survey therefore roosting bats are not considered to pose a constraint in relation to the proposed works.

Two common bat species; common pipistrelle and soprano pipistrelle, were recorded commuting through the site along with a single pass of a rarer species, a noctule bat. The site is considered to be of value to commuting bats at district, local or parish level (Wray *et al.*, 2010. See Appendix 3 for details).

6 Recommendations and Enhancements

6.1 Site Design

6.1.1 Sensitive use of lighting

Increased levels of artificial light can cause disturbance to bats. Though several bat species can take advantage of artificial lighting systems for foraging, feeding off the insects they attract (including the pipistrelle species recorded within the site), other species avoid them as foraging within an illuminated area increases the risk of predation by nocturnal birds of prey or even domestic cats. If lighting is intensive and widespread, particularly lighting from lamps, which emit UV light (such as mercury vapour); it can deter some bats from utilising the site and in some instances, can act as a barrier across commuting lines. Research has also shown that certain types of artificial lighting (namely mercury vapour lamps) have been proven to disturb the emergence patterns of bats when they are placed within the vicinity of entrances to a bat roost.

Any additional lighting or alterations to existing lighting within site will be designed sensitively. Only the minimum light levels required to meet health and safety standards will be used within the site. The lighting plan should avoid any light spill towards the woodland.

7 Legislation and Policy

7.1 Bats

Bats and their roost sites are protected by UK and European legislation.

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to:

- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose.

Additionally, the Conservation of Habitats and Species Regulations 2017 make it an offence to:

- Deliberately capture or kill a bat;
- Deliberately disturb a bat;
- Damage or destroy a breeding site or a resting place of a bat; and
- Keep, transport, sell or exchange or offer for sale or exchange alive or dead bat or any part of a bat.

7.2 National Planning Policy Framework

Paragraph 174 of the National Planning Policy Framework (MHCLG, 2019) states that to protect and enhance biodiversity, development plans should:

- *“promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity”.*

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles (paragraph 175):

- Development whose primary objective is to conserve or enhance biodiversity should be supported; and
- Opportunities to incorporate biodiversity in and around developments should be encouraged.

7.3 Local Planning Policy

Reading Borough Councils' Local Plan, which was adopted in November 2019, contains the following relevant planning policy.

Policy EN12: Biodiversity and the Green Network

"On all sites, development should not result in a net loss of biodiversity and geodiversity, and should provide a net gain for biodiversity wherever possible. Development should:

- *Protect and wherever possible enhance features of biodiversity interest on and adjacent to the application site, incorporating and integrating them into development proposals wherever practicable"*

8 References

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.

MHCLG (2019) *National Planning Policy Framework*. Ministry of Housing Communities and Local Government

Wray, S., Wells, D., Long, E. and Mitchell-Jones, T. (2010) *Valuing bats in Ecological Impacts Assessment*. In Practice 70, 23-26.

Reading Borough Council (2019) *Reading Borough Local Plan*.

Appendix 1 - Photographs



Photo 1: Southern elevation of the house



Photo 2: Northern elevation of the house



Photo 3: Internal loft space convert into living space



Photo 4: Gap under fascia board on single storey extension to the north



Photo 5: Missing mortar under ridge tiles and lifted tiles around roof window



Photo 6: Lifted tile behind chimney

Appendix 2 – Site/ Species Value

Table 3. Categorising bats by distribution and rarity

Rarity within range	England
Rarest (popn. Under 10,000)	Greater horseshoe (<i>Rhinolophus ferrumequinum</i>) Bechstein's (<i>Myotis bechsteinii</i>) Alcathoe (<i>Myotis alcathoe</i>) Greater mouse-eared (<i>Myotis myotis</i>) Barbastelle (<i>Barbastella barbastellus</i>) Grey long-eared (<i>Plecotus austriacus</i>)
Rarer (popn. 10,000 – 100,000)	Lesser horseshoe (<i>Rhinolophus hipposideros</i>) Whiskered (<i>Myotis mystacinus</i>) Brandt's (<i>Myotis brandtii</i>) Daubenton's (<i>Myotis daubentonii</i>) Natterer's (<i>Myotis nattereri</i>) Leisler's (<i>Nyctalus leisleri</i>) Noctule (<i>Nyctalus noctula</i>) Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>) Serotine (<i>Eptesicus serotinus</i>)
Common (popn. Over 100,000)	Common pipistrelle (<i>Pipistrellus pipistrellus</i>) Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) Brown long-eared (<i>Plecotus auritus</i>)

Table 4. Valuing commuting routes

Species	Number of bats	Roosts/potential roosts nearby	Type and complexity of linear features
Common (2)	Individual bats (5)	None (1)	Absence of (other) linear features (1)
-	-	Small number (3)	Unvegetated fences and large field sizes (2)
Rarer (5)	Small number of bats (10)	Moderate number/Not known (4)	Walls, gappy or flailed hedgerows, isolated well-grown hedgerows, and moderate field sizes (3)
-	-	Large number of roosts, or close to a SSSI for the species (5)	Well-grown and well-connected hedgerows, small field sizes (4)
Rarest (20)	Large number of bats (20)	Close to or within a SAC for the species (20)	Complex network of mature well-established hedgerows, small fields and rivers/streams (5)

Table 5. Scoring system for valuing commuting and foraging bats

Geographic frame of reference	Score
International	>50
National	41 - 50
Regional	31 - 40
County	21 - 30
District, local or parish	11 - 20
Not important	1 - 10